



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,273	03/10/2004	Oran Uzrad-Nali	112-0367US	9389
85197 7590 08/18/2009 Wong Cabello Lutsch Rutherford & Brucculeri LLP 20333 Tomball Parkway, 6th Floor Houston, TX 77070			EXAMINER NGUYEN, MERILYN P	
			ART UNIT 2163	PAPER NUMBER
			MAIL DATE 08/18/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/796,273

**Applicant(s)**

UZRAD-NALI ET AL.

**Examiner**

Marilyn P. Nguyen

**Art Unit**

2163

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-11 and 13 is/are rejected.
- 7) ☒ Claim(s) 4, 12 and 14-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)
- Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. In response to the communication dated 05/26/2009, claims 1-19 are active in this application as the result of the cancellation of claims 39-59.

***Priority***

2. Applicant's claim for the benefit of a prior-filed application Serial No. 60/452969 under 35 U.S.C. 119(e) is acknowledged.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 5-11 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Jun (US 6,421,343).

Regarding claim 1, Jun discloses a method for accelerating storage access in a network, said method comprising:

a) receiving a data record having a plurality of data segments as a received data record  
(See col. 3, lines 57-59);

b) saving said data segments in a local memory of a network controller (NC) (See col. 3, lines 63-65);

c) assigning a virtual write buffer (VWB) entry, in said NC local memory, for the received data record (See col. 6, lines 30-45);

d) reassembling said data segments of said data record using said VWB entry to form a reassembled data record (See col. 6, lines 45-53 and col. 7, lines 22-26); and,

e) sending said reassembled data record from the network controller directly to an I/O controller of a storage device (See col. 3, lines 48-51 and col. 6, lines 53-55).

Jun discloses a network controller comprising a core processor, a receive handler, a direct memory access controller, a local memory at Figures 2 and 3.

Regarding claim 2, Jun further discloses allocating a private buffer to a memory address space in a host local memory (See col. 6, lines 30-33).

Regarding claim 3, Jun discloses wherein said NC (ATM Network interface handler 103) is coupled to a storage target system and to a network (See Fig. 2).

Regarding claim 5, Jun discloses wherein said I/O controller is further coupled to a storage device (See Fig. 2).

Regarding claim 6, Jun discloses wherein the data is received using a sub-process comprising:

i) performing a transport layer processing on the data segments (See col. 3, lines 57-59);  
and,

ii) assigning a memory object descriptor (MOD) to each of the data segments (See col. 5, lines 10-25).

Regarding claim 7, Jun discloses wherein each said MOD points to a memory location where a corresponding data segment is stored in the NC local memory (See col. 5, lines 10-25).

Regarding claim 8, Jun discloses wherein said MODS are linked together to form a record structure (See col. 5, lines 20-32).

Regarding claim 9, Jun discloses wherein an available private buffer is used from a pool of pre-allocated private buffers (See col. 6, lines 32-42).

Regarding claim 10, Jun discloses wherein said NC maintains a VWB table, wherein said VWB table includes at least a VWB entry (See col. 7, lines 22-26).

Regarding claim 11, Jun discloses wherein said VWB entry comprises at least two subentries, wherein a first sub-entry is an offset field and a second sub-entry is a pointer field (See col. 6, line 66 to col. 7, line 11).

Regarding claim 13, Jun discloses wherein reassembling said data segments comprises setting said offset field and said pointer field (See col. 7, lines 1-11).

***Response to Arguments***

4. Applicant's arguments filed 05/26/2009 have been fully considered but they are not persuasive.

Applicants argue (Page 6 of the Remarks) that Jun does not teach reassembling said data segments of said data record using said VWB entry to form a reassembled data record. Applicants also note that “col. 6, lines 45-53 indicate that the received cells are reassembled in the host memory 102. Col. 7, lines 22-26 indicate the same location for the reassembly of the received cells”. The Examiner respectfully disagrees. The claim recites reassembling data segments using VWB entry, wherein VWB entry is in local memory; however, the claim does not recite whether the data segments are reassembled in local memory. Column 6 of Jun discloses “the local memory managed by the reassembly processing block comprises...a reassembly cell buffer 310, a reassembly free buffer descriptor table 320” (lines 18-22) and column 7 discloses reassembling received cells “using the reassembly cell memory 310, the reassembly VC table 330 and the free buffer descriptor table 320 in the local memory” (lines 22-26). Thus Jun clearly teach reassembling data segments of data record using VWB entry in local memory.

Applicants further argue Jun does not teach sending said reassembled data record from the network controller directly to an I/O controller of a storage device and states that “Jun only has the reassembled record in the host memory, not the local memory of the network controller as would be necessary to accomplish this step”. The Examiner respectfully disagrees. As addressed above, the claim does not recite whether the data segments are reassembled in local

memory. Col. 3, lines 48-51 discloses the reassembled packet is in host memory (host memory corresponds to storage device) wherein the system bus 105 of Figure 2 is the I/O controller of the host memory where the system bus transmit and received cell data (See col. 4, lines 38-39).

Applicants argue that June does not teaches NC is couple to a storage target system and a network. The Examiner respectfully disagrees. Figure 2 discloses NC (ATM Network interface handler 103) coupled to a storage target System (Host memory 102) and a network (ATM network 109).

Applicants argue that Jun does not show an I/O controller as required and a storage device coupled to an I/O controller. The Examiner respectfully disagrees. As addressed above, Figure 2 discloses I/O controller (system bus 105) couple to a storage device (memory 102).

#### ***Allowable Subject Matter***

5. Claims 4, 12 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

All the dependent claims 15-19 of claim 14 are also objected.

#### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marilyn P Nguyen whose telephone number is 571-272-4026. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

/Marilyn Nguyen/

AU 2163

/Hung T Vy/



Application/Control Number: 10/796,273

Page 8

Art Unit: 2163

Primary Examiner, Art Unit 2163